

WHAT IS CLAIMED IS

1. A self-centering unit for tire removal machines, comprising a plate (2) provided with a series of angularly equidistant radial slots (4), in each of which a clamping jaw is received and slides to grip the edge of a wheel rim, said clamping jaws being linked together in such a manner as to be always equidistant from the axis of said plate, at least one clamping jaw being associated with actuator means causing it to translate in a radial direction, characterized in that between said at least one clamping jaw and said actuator means there is interposed a positioner device arranged to vary the working position of said clamping jaws relative to the actuator means, without modifying their travel stroke.
2. A self-centering unit as claimed in claim 1, characterized in that said actuator means are associated with two opposing clamping jaws.
3. A self-centering unit as claimed in claim 1, characterized by providing a positioner device for each clamping jaw associated with said actuator means.
4. A self-centering unit as claimed in claim 1, characterized in that said positioner device comprises a crankshaft provided with a crank, of which the crankpin is received in a bush rigid with said clamping jaw and the outer pivots are connected to said actuator means, and means for locking said crankshaft in different working positions.
5. A self-centering unit as claimed in claim 4, characterized in that said locking means are associated with said crankshaft.
6. A self-centering unit as claimed in claim 4, characterized in that said

locking means are associated with the bush.

7. A self-centering unit as claimed in claim 4, characterized in that the lateral wall of said bush presents at least two holes angularly spaced apart.

5 8. A self-centering unit as claimed in claim 4, characterized in that said means for locking said positioner device in position comprise a pin.

9. A unit as claimed in claim 8, characterized in that said pin is elastically maintained inserted in one of the holes present in said bush by the action of a spring.

10 10. A unit as claimed in claim 8, characterized in that said pin is elastically maintained in a hole present in the crankpin of the crankshaft by the action of a spring.

11. A self-centering unit as claimed in claims 5 and 7, characterized in that said locking means associated with said crankshaft comprise a cup-shaped body the end of which is provided with a hole, and within which there slides a pin, one end of which is intended to be received in one of the holes of the bush, whereas the opposite end emerges from the cup-shaped body via said hole and is connected to an operating knob, said pin being elastically maintained within one of the holes of the bush by a spring
15
20 which is mounted about the pin and acts between the end of said cup-shaped body and a shoulder on the pin.

12. A self-centering unit as claimed in claim 6, characterized in that said locking means associated with the bush comprise a U-shaped latch, the base wall of which presents a rectangular aperture to be received by and

to translate on two flat portions of the bush, and the arms of which are provided with a pin and a spring, said pin being normally received in a matching hole in the crankpin of the crank by the action of said spring.

13. A self-centering unit as claimed in claim 1, characterized in that said
- 5 means for causing the clamping jaws to translate comprise at least one pneumatic cylinder-piston unit.